

April 18, 2022

To: Mt. Shasta City Council, Mt. Shasta Planning Commission, City Planner

From: Michael Williams

RE: Considerations for Bicycle Plan Recommendations

Hello City Staff, City Council Members, and Planning Commissioners:

This letter contains comments on the recommendations for bicycle facilities on Mt. Shasta Blvd and Pine Street in Mt. Shasta.

The current plan recommends protected bicycle lanes (PBLs) on Mt. Shasta Boulevard (MSB). Guidance published by the Federal Highway Administration recommends only bicycle lanes, preferably buffered, (see guidance at end of this letter) for a street like MSB. The FHWA's recommendations target the Interested but Concerned rider.

Despite the federal guidance, Alta is proposing PBLs. They are likely doing so in order to create an "All Ages & Abilities" facility – one that is suitable for riders from 8 to 80 years of age. But this goal is problematic for at least two reasons:

1. A PBL must include numerous unprotected segments (see diagram)
2. Removal of parking is needed to implement PBLs and is politically difficult

## Lack of Protection in the Protected Bike Lane

PBLs must interrupt their protection at every driveway and intersection - everywhere cars need to cross. PBLs work well in cities with long, unbroken block faces. Using yellow to show protection on the section of MSB from High Street to Alpine Street, (see diagram), illustrates the frequent interruptions.

Some mitigations are possible for these interruptions, e.g. driveway removal/modification, a 2-way bikeway on one side of the street, etc. but they are limited or introduce new problems of their own. If opposition arises, removing or modifying a business' driveway requires an amount of political will that is difficult to generate.

This frequency of interruption and lack of protection at intersections prevents a protected bike lane like this from achieving an All Ages & Abilities level of utility. Without the All Ages & Abilities level of protection, one should wonder why a more involved, more expensive treatment is recommended over the buffered bike lane recommended by federal guidance.



Figure 1 Illustration of Frequent Interruptions in a Protected Bike Lane on MSB

## Removal of On-Street Parking

Downtown Mt. Shasta does have unbroken block faces where this treatment could be successful. But the street is so narrow there that a PBL will require parking to be removed from at least one side of the street, possibly both. Given previous interactions with downtown business owners, there is a strong probability that the city council will not vote to remove parking from this portion of MSB thus weakening the most central portion of this corridor. Note also that some parking will need to be removed from almost every block of MSB for a protected bike lane facility.

Conflict over parking removal to add bicycle facilities is a nationwide condition. I was recently hired to help a small town in Pennsylvania that was unable to build out their bicycle network plan (also prepared by Alta) because of the opposition to removal of parking by the downtown business owners. Alta likely has many more such stories.

## Options to a Protected Bike Lane

But there are options to this urban-esque solution and its required removal of parking. One of those options is a “shared street”. The purpose of a shared street is to slow cars down to speeds where yielding to pedestrians and bicyclists is easy and all road users negotiate to share the street. There are many different designs possible for a shared street.

One successful example is the main street in Port Townsend, WA. Port Townsend is similar to Mt. Shasta. It is a town of 9,500 with a tourism-heavy economy. Water Street, their main street, is posted at 20 MPH and sees more than 7,000 cars per day (more than MSB). Trucks park in the middle of Water Street to make their deliveries because there are no alleys or back streets. Port Townsend has chosen one type of shared street called an edge lane road. It has been so successful that they are installing this treatment on 3 other roads this Summer.

The advantages to a shared street approach are:

- **Lower Cost:** This allows us to install more facilities for the same amount of grant money. This is important. Communities with significant increases in cycling were those that quickly implemented a complete bike network throughout their city.
- **Safety:** A street where vehicles travel slowly and drivers pay attention is safer for everybody. A number of the pedestrian crashes, if not all, on MSB involved pedestrians in a legal crosswalk. Slower vehicles make crashes less likely and, when they occur, less severe.
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- Peacefulness: A slow, shared street is a much pleasanter environment than an ordinary street with a protected bike lane. It is quieter, there are usually fewer drivers, studies show businesses often get more customers on these streets, one feels less stress when walking alongside or crossing, etc. It feels like a small town street should.



*Figure 2 Water Street, Port Townsend, WA*

Full disclosure: Edge lane roads are a treatment I am strongly associated with and Port Townsend is a client. I am not recommending this type of shared street for MSB nor am I recommending against it. It is merely one type of shared street design that maintains a small town feel while creating streets for all road users.

Some of these characteristics can be combined with a protected bike lane. But if you need a protected bike lane, you don't have a slow, safe, small-town street.

The All Ages & Abilities portion of the network for less experienced riders can be provided by a route paralleling MSB on streets one block to the east. These streets see extremely low volumes of traffic and require fewer, cheaper modification to create a much safer, quieter, and more comfortable route through town.

Because of the varied conditions, a shared street is likely not suitable for the entirety of MSB. Other treatments are more suitable for the extremities of MSB.

## Pine Street

A similar, but slightly different, situation exists on Pine Street. As on MSB, the PBL will have numerous interruptions thus limiting its usefulness for younger or more cautious riders. Pine Street is wider; this reduces the number of parking spots that would need to be removed.

The consideration for Pine Street is the wonderful alternative available on Cedar Street. Cedar Street is one short block west of Pine Street and directly serves two schools. Like Pine Street, it is a corridor that connects the downtown area and Lake Street to Lassen Lane. Its enormous advantage as a bicycle corridor is the extremely low traffic levels. It is far safer to put bicyclists, especially young students, on a street with low levels of traffic than to place them on a busier, faster street with a partially protected bike lane. It is also a much more enjoyable route to ride.

This option would require cooperation between the city and the school at the end of Cedar to ensure the connection of this corridor with Lassen Lane. This corridor also has the potential to provide connection to the Kingston Drive area north of Lassen Lane via a trail under the Lassen Lane overpass.

In addition to being able to travel on a street that appears deserted more often than not, Cedar Street can be easily modified to eliminate all stop signs for cyclists while preventing through travel by cars. This creates a direct, convenient route for cyclists with few cars.

## Summary

Protected bike lanes are an excellent solution on streets that can supply true protection. In the few blocks where PBLs can work well, opposition to removal of parking has a high chance of preventing or damaging their implementation.

Facilities for young, inexperienced, or cautious riders are best placed on quiet side streets where inexpensive improvements are all that is necessary to create an enjoyable, superior experience.

Busier streets should be dramatically slowed. Imagine a main street like Jacksonville, OR and Port Townsend, WA. A new state law will soon allow us to do this. Slow, shared streets are safer, quieter, kinder, more enjoyable, and support a townscape that is obviously “small town”.

Thank you,  
Michael Williams

# Excerpt, 2019 Federal Highway Administration’s Bikeway Selection Guide

## Desired Bikeway Type

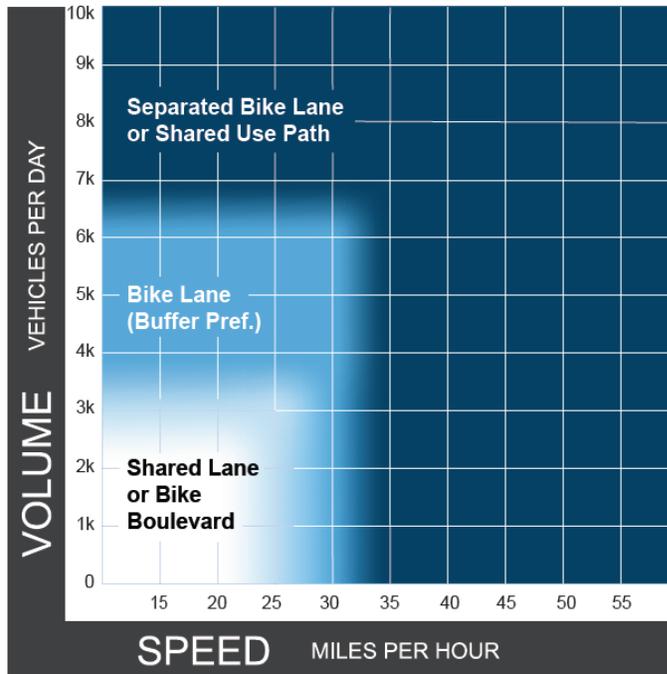
### Streets in Urban, Urban Core, Suburban, and Rural Town Contexts

The typical bicyclist user type for the urban, urban core, suburban, and rural town land use contexts is the Interested but Concerned category because of the development and density of destinations in these areas. Figure 9 provides guidance for how motor vehicle volume and speed can be taken into consideration to determine a preferred bikeway type.

Generally, the higher the speed and volume of a road, the more protective the recommended bikeway. Shared lanes or bicycle boulevards are recommended for the lowest speeds and volumes; bike lanes for low speeds and low to moderate volumes; and separated bike lanes or shared use paths for moderate to high speeds and high volumes. Because the design user is the Interested but Concerned cyclist, the most appropriate recommendation may be a more protective facility than necessary for a Highly Confident or Somewhat Confident design user.

BIKEWAY SELECTION GUIDE | 4. BIKEWAY SELECTION

Figure 9: Preferred Bikeway Type for Urban, Urban Core, Suburban and Rural Town Contexts



**Notes**

- 1 Chart assumes operating speeds are similar to posted speeds. If they differ, use operating speed rather than posted speed.
- 2 Advisory bike lanes may be an option where traffic volume is <3K ADT.
- 3 See page 32 for a discussion of alternatives if the preferred bikeway type is not feasible.

Source: 2019 Federal Highway Administration Bikeway Selection Guide  
[https://safety.fhwa.dot.gov/ped\\_bike/tools\\_solve/docs/fhwasa18077.pdf](https://safety.fhwa.dot.gov/ped_bike/tools_solve/docs/fhwasa18077.pdf)